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KASAHARA NOBUYORI****(54) ZINC ALKALINE BATTERY****(57) Abstract:**

PURPOSE: To decrease amalgamation ratio of negative zinc by containing a specified amount of indium and at least one element selected from lead, cadmium, bismuth, and tellurium, and barium in a zinc alloy to form a negative active material.

CONSTITUTION: 0.001@0.5wt% indium, 0.01@0.5wt% at least one element selected from lead, cadmium, bismuth, and tellurium, and 0.001@0.5 wt% barium are contained in a zinc alloy to form a negative electrode 2 as a negative active material. The negative electrode 2 is combined with a positive electrode 5 such as silver oxide, and a separator 4 to form a zinc alkaline battery. Corrosion resistant effect is increased by hydrogen overvoltage increasing capability of indium, segregation capability of lead and cadmium in the vicinity of grain boundary of zinc alloy, and affinity of barium with mercury. Therefore, amalgamation ratio is decreased and the battery having low environmental pollution and high performance can be obtained.

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